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Original Research Article

Why Pregnant Women Delay Care: Mapping Barriers Using the Three Delays Framework in Urban Slums of Meerut City, Uttar Pradesh

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Abstract: Maternal Mortality is a major global public health concern, particularly in low-resource settings. Women in the urban slums face obstacles in seeking and reaching care. This study mapped perceived barriers to maternity care among pregnant women in urban slums of Meerut City to the three delays framework: delay in deciding to seek care, in reaching a facility and in receiving adequate care. A cross-sectional study was conducted on of 110 pregnant women from six slum localities in Meerut city. Interviewer-administered, structured Likert-scale questionnaire was used for data collection. Twenty-six barrier items were assigned to the three delays, and two open-ended questions were coded to the same framework. Of the women, 40.0% were illiterate and 81.8% lived in joint families. For Delay 1, 85.5% reported that people discourage use of government facilities and 80.0% feared mistreatment. For Delay 2, 92.7% found night-time transport difficult and 90.0% cited poor roads. For Delay 3, 99.1% reported unclean facilities, 98.2% poor postpartum care and 90.0% rude staff. In free text, 58.2% named a Delay 2 problem as their biggest challenge, whereas 75.5% of suggested changes concerned quality of care in government facilities (Delay 3). Delay 1 scores were higher in joint than nuclear families (median 3.42 vs 2.17). Barriers cut across all three delays, with night-time access and quality of government care emerging as priorities. Findings are preliminary because of the small sample, limited response variability and perception-based measures.

Keywords: Birth Preparedness, Maternal Health, Three Delays, Urban Slum.

INTRODUCTION

Maternal mortality remains a major public health challenge in India. According to the Sample Registration System, the maternal mortality ratio (MMR) was 93 per 100,000 live births in 2019–21, but Uttar Pradesh recorded a considerably higher ratio of 151 (Registrar General of India, 2025). Many maternal deaths are preventable when women receive timely, skilled care, and delays in obtaining that care are central to their causes. Thaddeus and Maine (1994) described three phases of delay: delay in deciding to seek care (Delay 1), delay in reaching an appropriate facility (Delay 2) and delay in receiving adequate care once at the facility (Delay 3). The framework continues to be used to organize barriers to maternity care in low- and middle-income settings (Barnes-Josiah *et al*., 1998; Gabrysch & Campbell, 2009).

Birth preparedness and complication readiness (BPCR) is a strategy that aims to shorten these delays by encouraging women, families and communities to plan for birth and for possible emergencies, for example by identifying a place of delivery and a skilled provider, saving money, arranging transport and a blood donor, and recognizing danger signs (Del Barco, 2004). Preparation by a woman and her family, however, can only be effective if the barriers around her can be overcome.

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Rapid urbanization has created large slum populations in which crowding, poverty and limited services coexist with physical proximity to urban hospitals (Ezeh *et al*., 2017). Studies of birth preparedness in Indian slums show gaps in preparation. In slums of Indore, more than half of the deliveries took place at home, with low skilled attendance among them (Agarwal *et al*., 2010). In slums of Shivamogga, only 42% of pregnant women knew the term birth preparedness, and identification of a skilled provider and a blood donor was less common (Patil *et al*., 2022).

Barriers beyond a woman's own knowledge are well documented. Reviews of delivery service use, group the determinants into socio-cultural factors, perceived benefit and need, economic accessibility and physical accessibility (Gabrysch & Campbell, 2009). Mistreatment and poor quality of care in facilities can discourage women from using them (Bohren *et al*., 2015), and in South Asian settings women's mobility and decision-making are often constrained within the family (Mumtaz & Salway, 2005). In India, the Janani Suraksha Yojana was introduced to reduce financial barriers and increase facility births (Lim *et al*., 2010), and the fifth National Family Health Survey documents continued increases in institutional births (International Institute for Population Sciences [IIPS] & ICF, 2021). Whether these gains reach women in urban slums, however, depends on the local barriers they face at each stage of care seeking.

To our knowledge, few studies from western Uttar Pradesh have organized the perceived barriers of urban slum women using the three delays framework. This study therefore aimed to map perceived barriers to maternity care among pregnant women in urban slums of Meerut City to the three delays, to identify which delays were most frequently reported, and to explore how barriers varied with selected household characteristics.

LITERATURE REVIEW

India has made steady progress in reducing maternal deaths, with a national maternal mortality ratio of 93 per 100,000 live births in 2019–21, yet Uttar Pradesh remained well above this at 151 (Registrar General of India, 2025). Because most maternal deaths are preventable with timely skilled care, researchers have long looked at why care is not obtained in time. Thaddeus and Maine (1994) proposed that deaths arise from three successive delays: in deciding to seek care, in reaching a facility, and in receiving adequate care once there. The model has since been applied to facility reviews, verbal autopsies and community surveys (Barnes-Josiah *et al*., 1998). Studies using it have linked each delay to worse maternal outcomes (Pacagnella *et al*., 2014) and have shown that socio-cultural, economic and health-system factors interact rather than act separately (Sk *et al*., 2019).

Delay 1: Deciding to Seek Care

The decision to seek care is rarely made by the woman alone. In South Asian settings, mobility and household decisions are often controlled by husbands and senior in-laws, so a woman may know that care is needed yet be unable to act on it (Mumtaz & Salway, 2005). A review of delivery service use grouped such influences under socio-cultural factors and perceived benefit and need, and noted that low trust in a facility reduces the perceived benefit of going there (Gabrysch & Campbell, 2009).

Delay 2: Reaching the Facility

Distance, absence of affordable transport, poor roads and difficulty travelling at night were central to the original framework (Thaddeus & Maine, 1994) and remain the main components of physical accessibility in later reviews (Gabrysch & Campbell, 2009). Urban residence does not remove this delay: slums may lie close to hospitals in a straight line yet be cut off by narrow lanes, traffic, cost of private vehicles and unreliable emergency transport (Ezeh *et al*., 2017).

Delay 3: Receiving Adequate Care

Reaching a facility does not guarantee good care. Global evidence documents mistreatment during childbirth, including physical and verbal abuse, poor rapport and failure to meet professional standards, along with health-system constraints such as shortages of staff, beds and supplies (Bohren *et al*., 2015). Poor quality is itself a cause of avoidable deaths and of low demand for services (Kruk *et al*., 2018). Where public facilities are rated poorly and private care is costly, women face a difficult choice that also feeds back into Delay 1.

Birth Preparedness in Urban Slums

Birth preparedness and complication readiness (BPCR) aims to shorten all three delays through advance planning for place of birth, skilled provider, funds, transport, blood donor and recognition of danger signs (Del Barco, 2004). Studies of slum populations show that such preparation is often incomplete. In Indore slums, more than half of deliveries occurred at home with little skilled attendance (Agarwal *et al*., 2010), and in Shivamogga slums only 42% of pregnant women knew the term birth preparedness, with identification of a skilled provider and a blood donor lagging behind (Patil *et al*., 2022).

Gap addressed. Studies have examined birth preparedness in Indian slums, and others have used the three delays in rural or facility settings, but few have organised the perceived barriers of urban slum women in western Uttar Pradesh under all three delays at once, or compared their structured responses with their own words. This study addresses that gap.

Research Objectives

Aim-To map perceived barriers to maternity care among pregnant women in urban slums of Meerut City to the three delays framework.

Specific objectives

1. To describe the socio-demographic and obstetric characteristics of pregnant women in the study slums.
2. To identify perceived barriers to deciding to seek care (Delay 1).
3. To identify perceived barriers to reaching a health facility (Delay 2).
4. To identify perceived barriers to receiving adequate care at the facility (Delay 3).
5. To document, in women's own words, the biggest challenge faced and the change they would suggest, coded to the three delays.

Variables Identified for Questionnaire Items, Mapped to Objectives

The Question number mentioned in the table below is the item number used in Table 2. Barrier items use 5-point Likert scales (1 = strongly disagree to 5 = strongly agree); items marked as R, are reverse-scored so that a higher score always means a stronger barrier.

Objective	Variable	Questionnaire items (Table 2)	Type and Scale
1	Age, gestational age, trimester	Age; Gestational Age Trimester	Continuous; categorical
1	Family type, religion, locality	Family system; Religion; Address	Categorical
1	Education of woman and husband, husband's occupation, annual family income	Education of Woman; Education of Husband; Occupation of Husband; Family's Annual Income (INR)	Categorical (ordinal)
1,6	Distance to nearest facility	Distance to Facility	Ordinal, 4 categories
1	Gravidity, deliveries, miscarriage, caesarean, previous complication, previous place of delivery	Gravida; No of Deliveries; No of Miscarriages; History of Caesarean; History of Complication	Count; Yes/No
2	Social discouragement of government facilities	Q1	Likert
2	Fear of mistreatment	Q2	Likert
2	Woman's own decision-making (R)	Q3	Likert, Reversed
2	In-law decision-making	Q4	Likert
2	Food and mobility restrictions in pregnancy; perceived effect on health	Q5, Q6	Likert
3	Transport cost and lack of transport	Q7, Q10	Likert
3	Distance, road condition, night-time travel, access from slum	Q8, Q11, Q12, Q13	Likert
3	Ambulance availability (R)	Q9	Likert, Reversed
4	Cost of care (private hospital cost, hidden public expenses, delay due to lack of money)	Q14, Q15, Q26	Likert
4	Crowding and resource shortage (beds, doctors, nurses, medicines)	Q16–Q20	Likert
4	Quality and respect (cleanliness, inattentive staff, rude staff, emergency delay, postpartum care)	Q21–Q25	Likert

MATERIALS AND METHODS

Study Design and Setting

A cross-sectional study was conducted among pregnant women living in six urban slum localities of Meerut City, Uttar Pradesh: Lisari, Shahpeer Gate, Bhumiya ka Pul, Zakir Colony, Shyam Nagar and Dhavai Nagar. Data were collected between June 2026 and August 2026.

Participants

A total of 110 pregnant women were interviewed. A non-probability convenience sampling technique was used. A total of 110 pregnant women aged 18-25 years across all gestational ages (6.4% first trimester, 66.4% second trimester 27.3% third trimester) were enrolled. All the participants were married and most of them were multigravida (88.2%) while 11.8% were primigravida.

Data Collection Tool

Data were collected through a structured, interviewer-administered questionnaire in Hindi language. It covered socio-demographic and obstetric characteristics, BPCR and perceived barriers to maternity care. Barrier statements were rated on five-point Likert items (1 = strongly disagree to 5 = strongly agree. Two open-ended questions asked each woman to name the biggest challenge she faced in obtaining maternity care and the change she would suggest.

Mapping of Barriers to the Three Delays

Twenty-six barrier items were assigned to the three delays (Table 2). Delay 1 (six items) covered discouragement from using government facilities, fear of mistreatment, who in the family makes the decisions about care, and restrictions during pregnancy. Delay2 (seven items) covered distance, availability and cost of transport, ambulance availability, road condition and night-time access. Delay 3 (Thirteen items) covered cost of care, overcrowding, and availability of beds, staff and medicines, together with cleanliness, staff behaviour, delay in emergency care and postpartum care. Two items worded in the opposite direction (the woman decides about her own care; an ambulance is available when needed) were reverse-scored so that higher scores always indicate a stronger barrier.

Ethical Considerations

Participation was voluntary, and written informed consent was obtained from every participant after the purpose of the study was explained. Confidentiality and anonymity of the responses were maintained.

RESULTS AND DISCUSSION

Characteristics of the Participants

Table 1 describes the 110 women. The mean age was 27.3 ± 4.6 years and the mean gestational age was 20.4 ± 6.1 weeks, with two-thirds (66.4%) in the second trimester. Most women lived in joint families (81.8%), and 80.9% were Muslim. Educational attainment was low: 40.0% of women were illiterate and 49.1% had completed only primary education. Among husbands, 43.6% were illiterate and 42.7% had primary education; most worked as small vendors (36.4%), daily wage labourers (27.3%) or factory workers (20.0%). Annual family income exceeded Rs. 1,00,000 in 89.1% of families. More than half of the women (55.5%) lived 4 km or more from the nearest facility, 88.2% were multigravida, and 16.4% reported a previous complication.

Table 1: Socio-demographic and obstetric characteristics of the participants (n = 110)

Characteristic	Category	n (%)
Age (years), mean ± SD (range)	27.3 ± 4.6 (18–35)	
Gestational age (weeks), mean ± SD	20.4 ± 6.1	
Trimester	First	7 (6.4)
	Second	73 (66.4)
	Third	30 (27.3)
Family type	Joint	90 (81.8)
	Nuclear	20 (18.2)
Religion	Muslim	89 (80.9)
	Hindu	21 (19.1)
Woman's education	Illiterate	44 (40.0)
	Primary	54 (49.1)
	Junior high school	7 (6.4)
	High school	4 (3.6)
	Intermediate	1 (0.9)
Husband's education	Illiterate	48 (43.6)
	Primary	47 (42.7)
	Junior high school	5 (4.5)
	High school	6 (5.5)
	Intermediate	4 (3.6)
Husband's occupation	Small vendor	40 (36.4)
	Daily wage labourer	30 (27.3)
	Factory worker	22 (20.0)

	E-rickshaw driver	8 (7.3)
	Shopkeeper	7 (6.4)
	Private job	2 (1.8)
	Self-employed	1 (0.9)
Annual family income (INR)	50,000–1,00,000	12 (10.9)
	1,00,001–1,50,000	41 (37.3)
	1,50,001–2,00,000	40 (36.4)
	2,00,001–2,50,000	17 (15.4)
Distance to nearest facility	2–3 km	32 (29.1)
	3–4 km	17 (15.5)
	4–5 km	39 (35.5)
	More than 5 km	22 (20.0)
Locality	Lisari	22 (20.0)
	Shahpeer Gate	21 (19.1)
	Bhumiya ka Pul	20 (18.2)
	Zakir Colony	19 (17.3)
	Shyam Nagar	17 (15.5)
	Dhavai Nagar	11 (10.0)
Gravidity	Primigravida	13 (11.8)
	Multigravida	97 (88.2)
Obstetric history	Previous caesarean section	16 (14.5)
	Previous complication	18 (16.4)
	One or more miscarriages	30 (27.3)
Previous delivery in	Public facility	47 (42.7)
	Private facility	7 (6.4)

SD: standard deviation. INR: Indian rupees.
Source- Researcher's Primary Data

Barriers across the Three Delays

Perceived barriers were widely endorsed at every stage of care seeking (Table 2 and Figure 1). The most frequently endorsed items belonged to Delay 3 (unclean facilities, 99.1%; poor postpartum care, 98.2%; costly private hospitals, 94.5%; rude staff, 90.0%) and Delay 2 (difficult night-time transport, 92.7%; poor roads, 90.0%). Within Delay 1, 85.5% of women agreed that people discourage use of government facilities and 80.0% feared mistreatment there. By contrast, relatively few women agreed that public facilities involve hidden expenses (15.5%) or that nurses were unavailable (28.2%).

Table 2: Perceived barriers to maternity care mapped to the three delays (n = 110)

Item	Barrier statement	Agree (%)	Neutral (%)	Disagree (%)	Mean (SD)
Delay 1: Deciding to seek care					
Q1	People discourage use of government facility	85.5	14.5	0.0	4.05 (0.59)
Q2	Fear of mistreatment at government facility	80.0	4.5	15.5	3.65 (0.75)
Q3	Woman does not decide about her own care (reverse-scored)	41.8	16.4	41.8	3.03 (0.99)
Q4	In-laws make decisions about delivery and care	67.3	15.5	17.3	3.54 (0.85)
Q5	Food and mobility restrictions during pregnancy	23.6	19.1	57.3	2.65 (0.85)
Q6	Restrictions perceived to affect health	18.2	2.7	79.1	2.39 (0.81)
Delay 2: Reaching the facility					
Q7	Transport cost is a barrier	55.5	13.6	30.9	3.24 (0.92)
Q8	Facility is too far	74.5	6.4	19.1	3.55 (0.80)
Q9	Ambulance not available when needed (reverse-scored)	30.0	66.4	3.6	3.28 (0.56)
Q10	Lack of transport	68.2	10.9	20.9	3.46 (0.84)
Q11	Poor road condition	90.0	6.4	3.6	4.01 (0.60)
Q12	Night-time transport is difficult	92.7	0.9	6.4	3.86 (0.50)
Q13	Access to facility from the slum is difficult	76.4	21.8	1.8	3.75 (0.48)
Delay 3: Receiving adequate care					
Q14	Private hospital is costly	94.5	3.6	1.8	3.96 (0.38)
Q15	Hidden expenses in public facility	15.5	43.6	40.9	2.75 (0.75)
Q16	Public facility is overcrowded	86.4	13.6	0.0	4.13 (0.62)

Item	Barrier statement	Agree (%)	Neutral (%)	Disagree (%)	Mean (SD)
Q17	Shortage of beds	71.8	28.2	0.0	3.97 (0.74)
Q18	Doctor unavailable	69.1	30.0	0.9	3.68 (0.54)
Q19	Nurse unavailable	28.2	34.5	37.3	2.92 (0.83)
Q20	Medicines unavailable	70.0	29.1	0.9	3.73 (0.54)
Q21	Unclean facilities	99.1	0.9	0.0	4.29 (0.48)
Q22	Staff inattentive	80.9	16.4	2.7	3.81 (0.52)
Q23	Delay in emergency care	42.7	54.5	2.7	3.42 (0.58)
Q24	Rude staff behaviour	90.0	8.2	1.8	3.87 (0.43)
Q25	Poor postpartum care	98.2	0.9	0.9	4.01 (0.29)
Q26	Delay in care due to lack of money	55.5	29.1	15.5	3.41 (0.76)

Agree = score 4–5; Neutral = 3; Disagree = 1–2, all in the direction of the barrier. Q3 and Q9 were reverse-scored. SD: standard deviation.

Source: Researcher's Primary Data

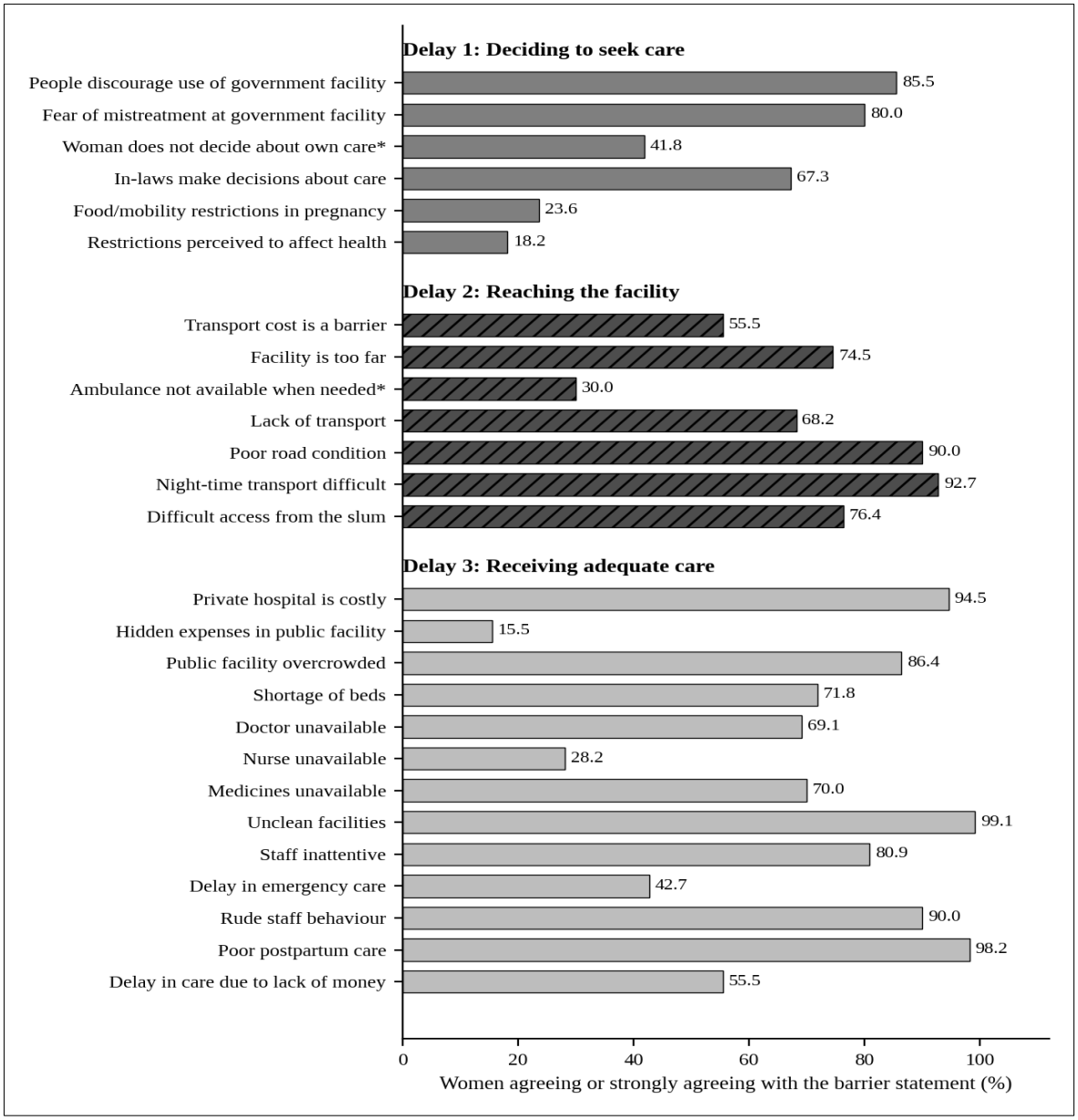


Figure 1: Percentage of women agreeing with each barrier statement, grouped by delay

*Reverse-scored items; the bar shows the percentage in the direction of the barrier

Source- Researcher's Primary Data

Delay 1: Deciding to Seek Care

Delay 1 was shaped less by lack of information than by the family environment and by distrust of public facilities. Two-thirds of women (67.3%) reported that in-laws make decisions about delivery and care, 41.8% did not feel able to decide about their own care, and 85.5% said that people discourage use of government facilities. Restrictions on food and mobility during pregnancy were reported by 23.6%, and 18.2% felt that these restrictions affected their health. This pattern is consistent with evidence from South Asia that women's mobility and decision-making are tied to the family (Mumtaz & Salway, 2005), and it shows how perceived quality problems (Delay 3) can feed back into the decision to seek care (Delay 1) (Gabrysch & Campbell, 2009).

In the free-text responses, 14 women (12.7%) said that their in-laws preferred home delivery with a local dai, and one woman said that her husband did not allow her to go to hospital alone (Table 3). Birth preparedness counselling in such households therefore needs to reach the mother-in-law and husband as well as the pregnant woman.

Delay 2: Reaching the Facility

Physical access was the most commonly named challenge in the free-text responses: 64 women (58.2%) described a Delay 2 problem as their biggest challenge, mainly the distance to the government hospital and poor roads (43 women; 39.1%) and the lack of transport at night in an emergency (19 women; 17.3%). These accounts agree with the structured items, in which 92.7% found night-time transport difficult, 90.0% reported poor roads, 76.4% found access from the slum difficult, 74.5% considered the facility too far and 68.2% reported a lack of transport. Transport cost was a barrier for 55.5%. The ambulance item showed uncertainty rather than clear agreement: 30.0% felt an ambulance was not available when needed, but 66.4% were neutral and only 39.1% reported being aware of the 108 ambulance service. These findings echo the original emphasis on distance and transport in the three delays model (Thaddeus & Maine, 1994) and the importance of physical accessibility in delivery service use (Gabrysch & Campbell, 2009).

Delay 3: Receiving Adequate Care

Delay 3 items were uniformly endorsed. Unclean facilities (99.1%), poor postpartum care (98.2%), rude staff (90.0%), overcrowding (86.4%), inattentive staff (80.9%), bed shortage (71.8%), medicine shortage (70.0%) and doctor unavailability (69.1%) were reported by most women. The items on rude and inattentive staff, uncleanliness, overcrowding and shortages correspond to the categories of poor rapport, failure to meet professional standards and health system constraints in the typology of mistreatment during childbirth (Bohren *et al*., 2015).

Cost concerns centered on private care: 94.5% agreed that private hospitals are costly, and 55.5% reported that care had been delayed for lack of money, while only 15.5% reported hidden expenses in public facilities. Women thus appeared to face a choice between a public facility they rated poorly and a private facility they could not afford, which was also visible in the free text: 18 women (16.4%) wrote that they had no money for private care and that the government hospital was crowded. Quality of care dominated women's suggested changes: 83 of 110 suggestions (75.5%) concerned Delay 3, led by cleaner government hospitals (23 women), privacy during labour (19), more doctors (15) and one patient per bed (8) (Table 3). Only 6.4% of women had previously delivered in a private facility compared with 42.7% in a public facility, so concerns about the cost of private care may rest more on perception than on experience.

Women's Own Words

Table 3 summarises the coded free-text answers. When asked for their biggest challenge, women named Delay 2 problems most often (58.2%), followed by Delay 3 (28.2%) and Delay 1 (13.6%). Their suggestions, in contrast, were directed mainly at the quality of care in government hospitals (75.5%), with 20.9% concerning access (Delay 2) and 3.6% the role of the ASHA (Delay 1). Women therefore experience distance and night-time transport as the greatest obstacle but believe that the greatest scope for improvement lies in the quality and dignity of care in government facilities.

Table 3: Free-text responses coded to the three delays (n = 110)

Theme	Delay	n (%)	Examples (paraphrased)
A. Biggest challenge			
Government hospital far away and poor roads	2	43 (39.1)	Distance to the government hospital and bad roads
No transport at night in an emergency	2	19 (17.3)	Night-time emergencies without vehicles
Ambulance does not arrive on time	2	2 (1.8)	Delay of ambulance in the locality
No money for private care; crowded government hospital	3	18 (16.4)	Private care unaffordable, government hospital overcrowded
Disrespectful or inattentive staff	3	11 (10.0)	Doctors and nurses should listen and treat women with respect
Long waiting; doctor absent	3	2 (1.8)	Long hours of waiting; doctor often not present
In-laws prefer home delivery with a local dai	1	14 (12.7)	Family preference for home delivery

Theme	Delay	n (%)	Examples (paraphrased)
Husband does not allow going alone to hospital	1	1 (0.9)	Restriction on independent travel
B. Suggested change			
Cleaner government hospitals	3	23 (20.9)	Cleanliness of wards and toilets
Privacy for women in labour	3	19 (17.3)	Privacy during labour in government hospitals
Faster, better ambulance service	2	19 (17.3)	Ambulance service improved and faster
More doctors in government hospitals	3	15 (13.6)	More doctors available
One patient per bed	3	8 (7.3)	No sharing of beds
More financial help for delivery	3	7 (6.4)	Increase in financial support
Free medicines	3	6 (5.5)	Medicines free in all government hospitals
Female doctor always available	3	3 (2.7)	A lady doctor available at all times
Respectful staff behaviour	3	2 (1.8)	Staff should behave respectfully
Closer hospital; night transport	2	4 (3.6)	Hospital nearer the slum (2); night transport (2)
More regular ASHA visits	1	4 (3.6)	ASHA should visit more regularly

Delay: 1 = deciding to seek care; 2 = reaching the facility; 3 = receiving adequate care. Each woman gave one response to each question; percentages are of 110 women.

Source: Researcher's Primary Data

Implications for Practice

Three implications follow. First, birth plans made during antenatal contacts should include a concrete arrangement for night-time transport and should not assume that an ambulance will arrive; only 39.1% of women reported awareness of the 108 service. Second, public facilities serving slum populations need visible improvements in cleanliness, privacy and respectful behaviour, as these are the changes women ask for and they also bear on women's trust and willingness to attend. Third, counselling should involve mothers-in-law and husbands, and ASHA workers are well placed to do this, although only 45.5% of women reported access to an ASHA, so their reach in these localities needs strengthening.

Limitations

This was a small cross-sectional study from one city, and its findings cannot be generalised to other slum populations; four in five participants were Muslim, and most lived in joint families. Barriers were measured as perceptions on Likert items rather than observed, and responses may be affected by social desirability. Comparisons were unadjusted, and groups such as nuclear families (n = 20) and primigravida women (n = 13) were small. Free-text responses were limited to one answer per question. A larger study with a probability sample and a validated instrument is needed to confirm these findings.

CONCLUSION

Among pregnant women in urban slums of Meerut, perceived barriers to maternity care were present at all three delays. Family decision-making and distrust of government facilities shaped the decision to seek care, poor roads and the lack of night-time transport hindered reaching a facility, and unclean, crowded and disrespectful government facilities limited the quality of care received. Women identified quality of care in government facilities as the area in which change would help most. Programmes that promote birth preparedness in urban slums should therefore combine family-level counselling with reliable night-time transport and visible improvements in respectful, clean and private care. These preliminary findings should be tested in a larger, probability-based study.

REFERENCES

- Registrar General of India. (2025). Special bulletin on maternal mortality in India 2019–21. Office of the Registrar General & Census Commissioner, Ministry of Home Affairs, Government of India.
- Thaddeus, S., & Maine, D. (1994). Too far to walk: Maternal mortality in context. Social Science & Medicine, 38(8), 1091–1110.
- Barnes-Josiah, D., Myntti, C., & Augustin, A. (1998). The "three delays" as a framework for examining maternal mortality in Haiti. Social Science & Medicine, 46(8), 981–993.
- Gabrysch, S., & Campbell, O. M. R. (2009). Still too far to walk: Literature review of the determinants of delivery service use. BMC Pregnancy and Childbirth, 9, 34.
- Del Barco, R. C. (2004). Monitoring birth preparedness and complication readiness: Tools and indicators for maternal and newborn health. JHPIEGO.
- Pacagnella, R. C., Cecatti, J. G., Parpinelli, M. A., et al. (2014). Delays in receiving obstetric care and poor maternal outcomes: Results from a national multicentre cross-sectional study. BMC Pregnancy and Childbirth, 14, 159.

- Sk, M. I. K., Paswan, B., Anand, A., & Mondal, N. A. (2019). Praying until death: Revisiting three delays model to contextualize the socio-cultural factors associated with maternal deaths in a region with high prevalence of eclampsia in India. BMC Pregnancy and Childbirth, 19, 314.
- Ezeh, A., Oyebode, O., Satterthwaite, D., Chen, Y.-F., Ndugwa, R., Sartori, J., Mberu, B., Melendez-Torres, G. J., Haregu, T., Watson, S. I., Caiaffa, W., Capon, A., & Lilford, R. J. (2017). The history, geography, and sociology of slums and the health problems of people who live in slums. The Lancet, 389(10068), 547–558.
- Agarwal, S., Sethi, V., Srivastava, K., Jha, P. K., & Baqui, A. H. (2010). Birth preparedness and complication readiness among slum women in Indore City, India. Journal of Health, Population and Nutrition, 28(4), 383–391.
- Patil, A. A., Koppad, R., Nagendra, K., & Chandrashekar, S. V. (2022). Level of birth preparedness and complication readiness among pregnant women residing in urban slums of Shivamogga city, India. National Journal of Community Medicine, 13(3). https://doi.org/10.55489/njcm.1332022390
- Bohren, M. A., Vogel, J. P., Hunter, E. C., Lutsiv, O., Makh, S. K., Souza, J. P., Aguiar, C., Saraiva Coneglian, F., Diniz, A. L. A., Tunçalp, Ö., Javadi, D., Oladapo, O. T., Khosla, R., Hindin, M. J., & Gülmezoglu, A. M. (2015). The mistreatment of women during childbirth in health facilities globally: A mixed-methods systematic review. PLoS Medicine, 12(6), e1001847.
- Mumtaz, Z., & Salway, S. (2005). "I never go anywhere": Extricating the links between women's mobility and uptake of reproductive health services in Pakistan. Social Science & Medicine, 60(8), 1751–1765.
- Lim, S. S., Dandona, L., Hoisington, J. A., James, S. L., Hogan, M. C., & Gakidou, E. (2010). India's Janani Suraksha Yojana, a conditional cash transfer programme to increase births in health facilities: An impact evaluation. The Lancet, 375(9730), 2009–2023.
- International Institute for Population Sciences, & ICF. (2021). National Family Health Survey (NFHS-5), 2019–21: India. IIPS.
- von Elm, E., Altman, D. G., Egger, M., Pocock, S. J., Gøtzsche, P. C., & Vandenbroucke, J. P. (2007). The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: Guidelines for reporting observational studies. The Lancet, 370(9596), 1453–1457.
- Kruk, M. E., Gage, A. D., Arsenault, C., et al. (2018). High-quality health systems in the Sustainable Development Goals era: Time for a revolution. The Lancet Global Health, 6(11), e1196–e1252.